

1        CLAIMS - I claim

2            1.     A semiconductor workpiece support for use in processing a  
3 semiconductor workpiece, comprising:

4            a processing head mounted for controlled motion to allow the  
5 processing head to be mated with a processing bowl to confine a  
6 processing chamber therebetween;

7            a rotor mounted for controlled rotation upon the processing head,  
8 said rotor having a front face which is exposed to the processing  
9 chamber and a back face opposite to said front face;

10           a workpiece holder for holding the semiconductor workpiece in  
11 juxtaposition to the front face of the rotor;

12           a beam emitter for emitting an emitted optical beam from a  
13 location behind the back face of the rotor;

14           a beam detector for detecting any reflected optical beam which  
15 results from said emitted optical beam if said emitted optical beam is  
16 reflected from a workpiece held by the workpiece holder.

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18           2.     The semiconductor workpiece support of claim 1 wherein  
19 said detector can operate in a mode which discriminates on the angle  
20 of any reflected optical beam.

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22           3.     The semiconductor workpiece support of claim 1 wherein  
23 said beam detector is defined to include at least a pair of detectors.  
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1           4.     The semiconductor workpiece support of claim 1 and further  
2     comprising at least one window provided in the rotor to improve  
3     transmission of the emitted or reflected beams.

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5           5.     A semiconductor workpiece support for use in processing a  
6     semiconductor workpiece, comprising:

7           a processing head;

8           a rotor mounted for controlled rotation upon the processing head,  
9     said rotor having a front face which is exposed to a processing chamber  
10    and a back face opposite to said front face;

11          a workpiece holder for holding the semiconductor workpiece in  
12    juxtaposition to the front face of the rotor;

13          a beam emitter for emitting an emitted optical beam from a  
14    location behind the back face of the rotor;

15          a beam detector for detecting any reflected optical beam which  
16    results from said emitted optical beam if said emitted optical beam is  
17    reflected from a workpiece held by the workpiece holder.

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19          6.     The semiconductor workpiece support of claim 5 wherein  
20    said detector can operate in a mode which discriminates on the angle  
21    of any reflected optical beam.

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23          7.     The semiconductor workpiece support of claim 5 wherein  
24    said beam detector is defined to include at least a pair of detectors.

1           8.     The semiconductor workpiece support of claim 5 and further  
2     comprising at least one window provided in the rotor to improve  
3     transmission of the emitted or reflected beams.

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5           9.     A semiconductor workpiece support for use in processing a  
6     semiconductor workpiece, comprising:

7                 a processing head;

8                 a workpiece holder for holding the semiconductor workpiece in  
9     juxtaposition to a workpiece holder panel;

10                a beam emitter for emitting an emitted optical beam from a  
11     location behind the workpiece holder panel, said emitted optical beam  
12     passing through said workpiece holder panel;

13                a beam detector for detecting any reflected optical beam which  
14     results from said emitted optical beam if said emitted optical beam is  
15     reflected from a workpiece held by the workpiece holder.

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17           10.    The semiconductor workpiece support of claim 9 wherein  
18     said detector can operate in a mode which discriminates on the angle  
19     of any reflected optical beam.

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21           11.    The semiconductor workpiece support of claim 9 wherein  
22     said beam detector is defined to include at least a pair of detectors.

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1 16. A method according to claim 13 and further defined by  
2 discriminating in said detecting step to detect a reflected beam which  
3 is incident upon at least one detector at an angle associated with  
4 reflection from any workpiece present, and minimizing detection of any  
5 beam reflected from surfaces of said rotor.  
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